"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAVKO, A.G., red.; GATILLO, P.D., red.; KOVALENKO, E.P., red.; TKACHEVA, T., red.izd-va; ATLAS, A., tekhn. red.

[Water economy of White Russia] Vodnoe khoziaistvo Belorussii. Minsk, Izd-vo AN BSSR, 1963. 210 p. (MIRA 17:2)

1. Minsk. Institut vodnykh problem.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BOCHIN, N.A.; BULAVKO, A.G.; VLADIMIROV, A.M.; GRIGOR'YEV, V.I.; YEFREMOV, P.V.; ZAKHAROV, V.N.; MARGOLIN, I.M.; NEMCHINOV, P.V.; PACHKOV, Yu.S.; SOVERSHAYEV, V.A.; FEDOROV, V.G.

Brief news. Meteor. i gidrol. no.9:61-64 S '65. (MIRA 18:8)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAVKO, Iraida Grigor'yevna; VEREVKINA, N.M., red.; MORGUNOVA, G.M., tekhn. red.

[Exact and approximate computations] Tochnye i priblizhennye vychisleniia. Minsk, Izd-vo M-va vysshego srednego spetsial'nogo i professional'nogo obrazovaniia BSSR, 1963. 106 p. (MIRA 16:8)

(Approximate computation) (Errors, Theory of)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

SHNAYDERMAN, Iosif Berkovich,; BULAVKO, Yu. M., red.; LANOVSKAYA, M.R.,red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[T-4M and T-4MI tabulating machines; elements of automatic control and commutation methods] Tabuliatory T-4M i T-4MI; elementy avtomaticheskogo upravleniia i metody kommutatsii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958.199p. (MIRA 11:12)

(Tabulating machines)
(Automatic control)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAVSKAYA, M. N.

SAPPI, I.V.; FAYNGOL'D, Ya.I.; CHEBANENKO, N.S.; BULAVSKAYA, M.N.

Principles and methods in the treatment of bacillary dysentery.
Zhur.mikrobiol.epid. i immun. 28 no.4:118-125 Ap '57. (MLR 10:10)

1. Iz Lvovskogo okruzhnogo voyennogo gospitalya.
(DYSENTERY, BACILLARY, ther.
principles & methods)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

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Bulavskaya M.N.

SEPPI, I.V.; PLIGIN, A.M.; BULAVSKAYA, M.N.

The so-called bacterial carriers in dysentery. Zhur.mikrobiol.epid. i immun. no.1:76-82 Ja '58. (MIRA 11:4)
(DYSENTERY, BACILLARY, transmiss on, carriage (Rus)

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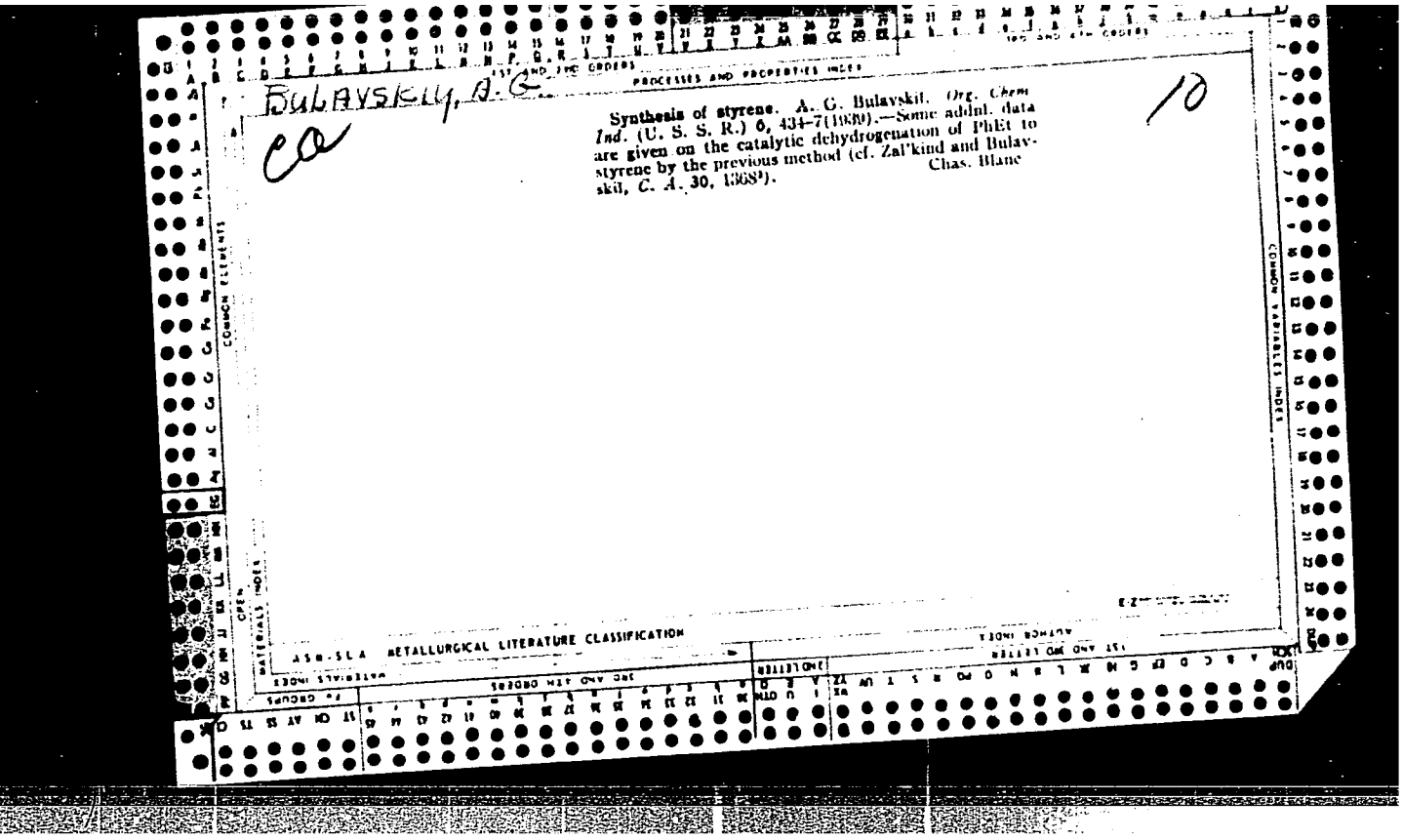
BULAVSKII, A. G.

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Synthesis of styrene. A. G. Bulavskii. *Org. Chem Ind.* (U. S. S. R.) 6, 434–7(1939).—Some addnl. data are given on the catalytic dehydrogenation of PhEt to styrene by the previous method (cf. Zal'kind and Bulavskii, *C. A.* 30, 1368[3]). Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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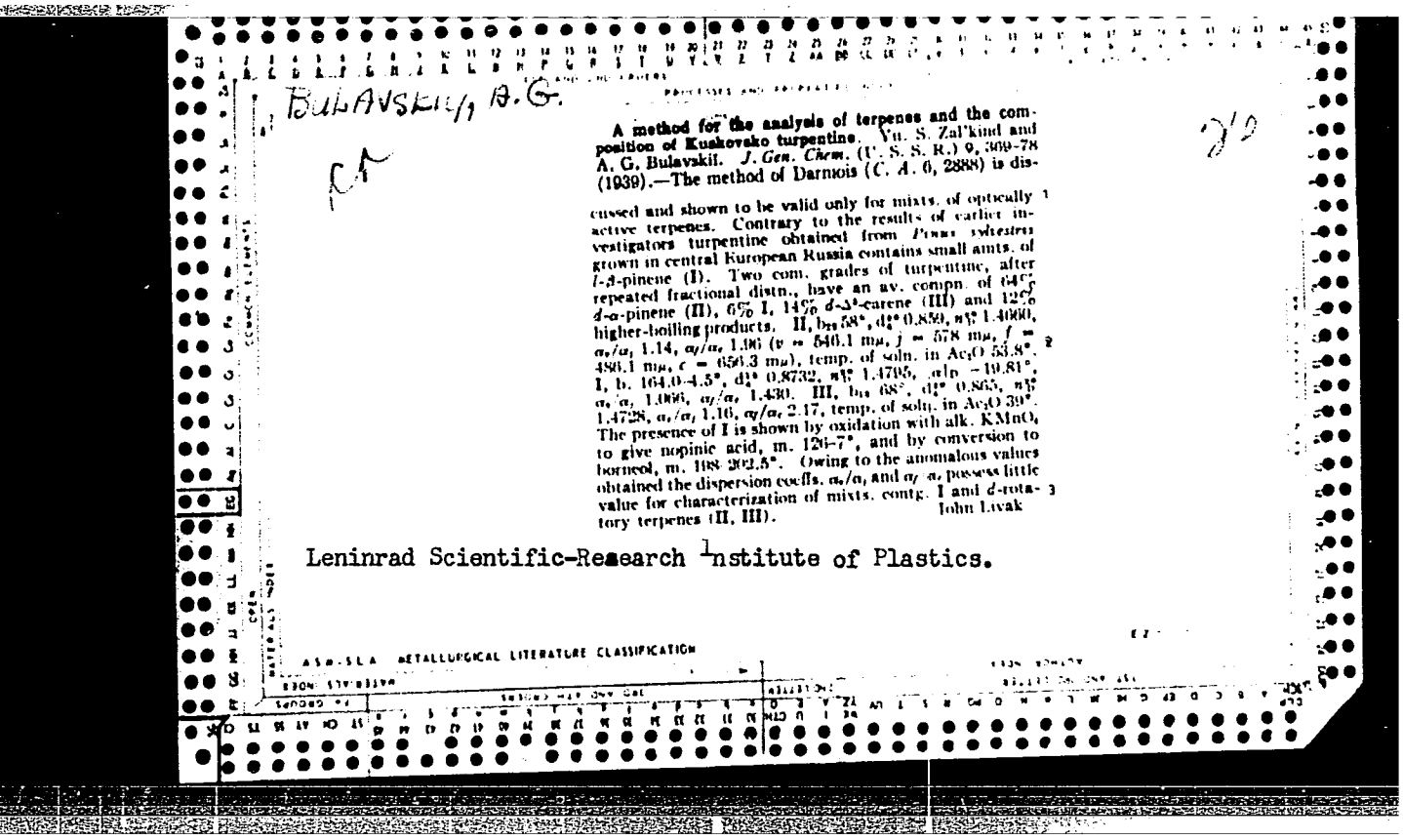

BULAVSKII, A. G.

A method for the analysis of terpenes and the composition of Kuskovsko turpentine. Yu. S. Zal'kind and A. G. Bulavskii. *J. Gen. Chem.* (U. S. S. R.) 9, 309–78 (1939).—The method of Darnois (*C. A.* 6, 2888) is discussed and shown to be valid only for mixts. of optically active terpenes. Contrary to the results of earlier investigators turpentine obtained from *Pinus sylvestris* grown in central European Russia contains small amts. of *l*-3-pinene (I). Two com. grades of turpentine, after repeated fractional distn., have an av. compn. of 64% *d*-α-pinene (II), 6% I, 14% *d*-3¹-carene (III) and 12% higher-boiling products. II, b_{15} 58°, d_4^{20} 0.859, n_D^{20} 1.4660, α_r/α_f 1.14, α_f/α_c 1.96 (ν = 546.1 mμ, f = 486.1 mμ, c = 656.3 mμ), temp. of soln. in Ac_2O 53.8°, I, b. 164.0–4.5°, d_4^{20} 0.8732, n_D^{20} 1.4705, α_D −10.81°, α_r/α_f 1.066, α_f/α_c 1.430. III, b_{15} 68°, d_4^{20} 0.865, n_D^{20} 1.4728, α_r/α_f 1.16, α_f/α_c 2.17, temp. of soln. in Ac_2O 39°. The presence of I is shown by oxidation with alk. $KMnO_4$ to give nopinic acid, m. 126–7°, and by conversion to borneol, m. 198–202.5°. Owing to the anomalous values obtained the dispersion coeffs. α_r/α_f and α_f/α_c possess little value for characterization of mixts. contg. I and *d*-rotatory terpenes (II, III).

John Livak

Leninrad Scientific-Research Institute of Plastics.

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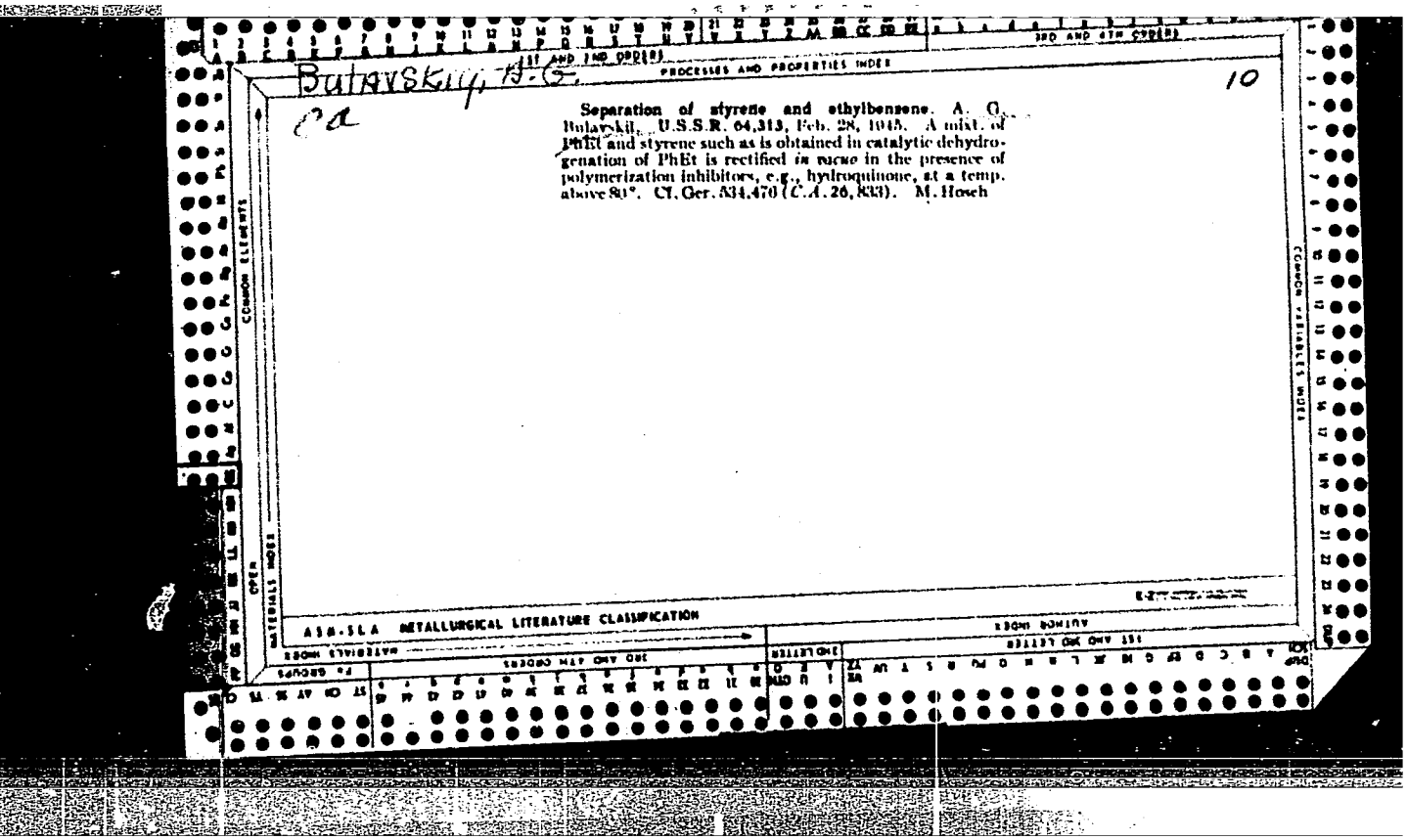

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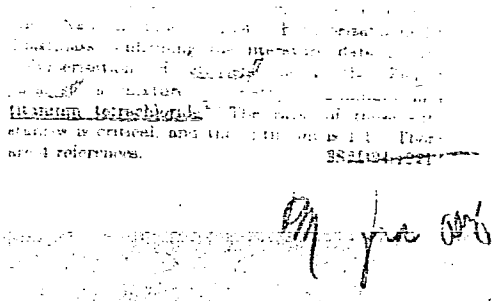
BULAVSKIY, A. G.



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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAVSKIY, A.G.

YEGOROV, N.M.; ARKHIPOVA, Z.V.; VESELOVSKAYA, Ye.V.; LEVINA, A.A.; SEMENOVA, A.S.; BULAVSKIY, A.G.; ANDREYEVA, I.N.

Cyclic and continuous methods for the polymerization of ethylene at low pressures. Khim. nauka i prom. 2 no.3:398-399 '57. (MLRA 10:8)

1. Nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass.
(Ethylene) (Polymerization)

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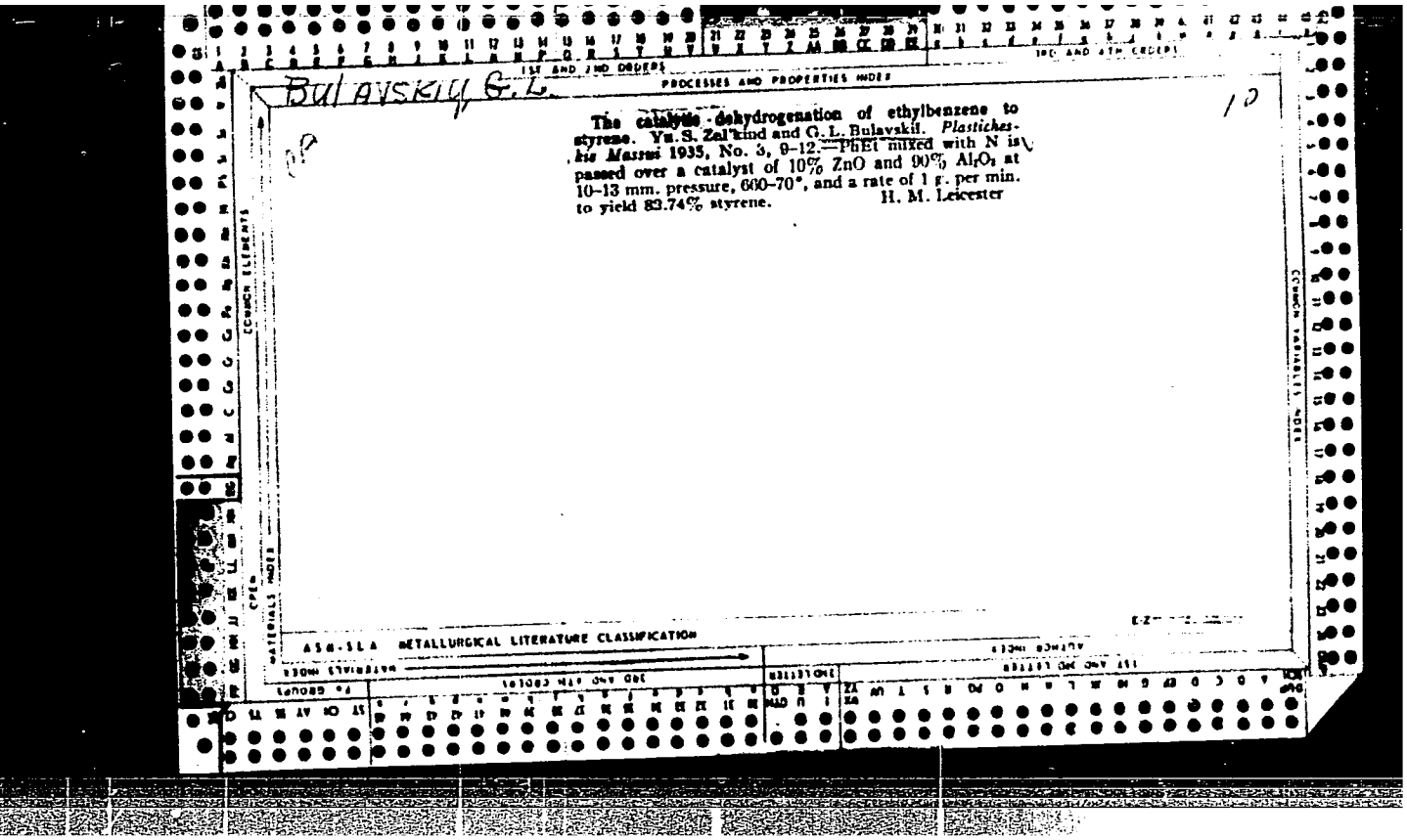

BULAVSKII, G. L.

PROCESSES AND PROPERTIES INDEX

The catalytic dehydrogenation of ethylbenzene to styrene. Yu. S. Zal'kind and G. L. Bulavskii. *Plasticheskie Massui* 1935, No. 3, 9–12.—PhEt mixed with N is passed over a catalyst of 10% ZnO and 90% Al_2O_3 at 10–13 mm. pressure, 660–70°, and a rate of 1 g. per min. to yield 83.74% styrene. H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAVSKIY, P. I.

Tekhnologiia izgotovleniia detalei i uzlov elektroizmeritel'nykh priborov /Technology of manufacturing parts and units of electric measuring instruments/. Leningrad, Mashgiz, 1952. 237 p.

SO: Monthl: List of Russian Accessions, Vol. 6, No. 5, August 1953

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAVSKIY, S.K.; STRUVE, M.E., redaktor; ROZIN, M.S., redaktor; GOLITSYN, A.V., redaktor kart; KOSHELEVA, S.M., tekhnicheskiy redaktor.

[Italy; popular sketch] Italiia; populiarnyi ocherk. Moskva, Gos. izd-vo geogr. lit-ry, 1954. 182 p. [Microfilm] (MIRA 8:2)
(Italy)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

AUTHOR: Bulavskiy, V.A. SOV/140-58-5-2/14

TITLE: On the Symbolic Representation of the Computation Plans in the Automatization of Programming (O simvolike zapisi vychislitel'nykh planov pri avtomatizatsii programmirovaniya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1958, Nr 5, pp 5-17 (USSR)

ABSTRACT: The paper contains a report on the results of the investigations concerning the automatization of the programming carried out in the Leningrad Section of the Mathematical Institute imeni Steklov. The following processes have been submitted to automatization: 1.) The decision on which succession operations are to be carried out, the sequence of which does not influence the result. 2.) The statement which parts of the material in the memory are really needed. 3.) The execution of the purely mechanic processes (addressing etc.). The present paper is devoted in particular to the completed symbolism of the computation plans, whereby the ideas of Kantorovich [Ref 2] might have shown the direction.
There are 2 Soviet references.

Card 1/2

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On the Symbolic Representation of the Computation Plans in the Automatization of Programming SOV/140-58-5-2/14

ASSOCIATION: LOMI imeni V.A.Steklova AN SSSR (LOMI imeni V.A.Steklov AS USSR)

SUBMITTED: November 27, 1957 (Date of Lecture, Leningrad)

Card 2/2

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AUTHOR: Bulavskiy, V.A.

TITLE: Iteration method of solving the problem of linear programming

PERIODICAL: Akademii nauk SSSR.Doklady, vol.137, No.2,1961, 258-260

TEXT: Given the system of linear inequalities

$$\sum_{j=1}^{n} a_j^{(i)} h^{(j)} \geqslant p^{(i)}, \quad i=1,2,\ldots,m; \qquad (1)$$

$$h^{(i)} \geqslant 0, \quad j=1,2,\ldots,n,$$

and the vector $c \in R_n$, where R_n-- n-dimensional Euclidean space of the vectors $h = (h^{(1)}, h^{(2)}, \ldots, h^{(n)})$. (1) determines a closed convex set $Q \subset R_n$. Problem I: Determine $h_0 \in Q$ so that $(c,h_0) \leq (c,h)$ for all $h \in Q$. Problem II: Determine $h_\sigma \in Q$ so that $(c+\sigma Bh_\sigma, h_\sigma) \leq (c+\sigma Bh_\sigma, h)$ for all $h \in Q$ (B is a given matrix, $\sigma > 0$).
Theorem 1: If there exists a vector h_0 solving the problem I, and if B

Card 1/5

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Iteration method of solving...

is positive definite: $(Bh,h) \geq \gamma \|h\|^2$ then for every $\sigma > 0$ there exists a vector h_σ solving the problem II, where $\|h_\sigma\| \leq \frac{1}{\gamma} \|B\| \cdot \|h_0\|$.

Theorem 2: It holds

a) the solution of problem II is unique;

b) for $\sigma \geq 0$, h_σ depends continuously on σ;

c) if $\sigma < \sigma'$ then $(c,h_\sigma) \leq (c,h_{\sigma'})$;

d) there exists a $\sigma_0 > 0$ so that for $\sigma \leq \sigma_0$ the vector h_0 is a solution of the problem I.

Therewith the solution of problem I is reduced to the solution of problem II. For the latter the author gives an iteration method as follows. From theorem 1 there follows the existence of a vector $v_\sigma = (v_\sigma^{(1)}, v_\sigma^{(2)}, \ldots, v_\sigma^{(m)})$ with the properties

$$\sum_{i=1}^{m} a_j^{(i)} v_\sigma^{(i)} \leq c^{(j)} + \sigma (Bh_\sigma)^{(j)} \text{ if } h_\sigma^{(j)} = 0,$$

Card 2/5

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Iteration method of solving...

$$\sum_{i=1}^{m} a_j^{(i)} v_\sigma^{(i)} = c^{(j)} + \sigma (Bh_\sigma)^{(j)} \quad \text{if } h_\sigma^{(j)} > 0$$

$$v_\sigma^{(i)} \geq 0, \quad i=1,2,\ldots,m \qquad (3)$$

$$v_\sigma^{(i)} = 0 \quad \text{if} \quad \sum_{j=1}^{n} a_j^{(i)} h_\sigma^{(i)} > p^{(i)}.$$

Let $a_j = (a_j^{(1)}, a_j^{(2)}, \ldots, a_j^{(m)})$, $p = (p^{(1)}, p^{(2)}, \ldots, p^{(m)})$; let $a_j \neq 0$, $j=1,2,\ldots,n$. Let B be a triangular matrix the elements of which equal zero over the principal diagonal, while the (μ, ν)-th element $(\nu < \mu)$ equals (a_μ, a_ν). Then $(Bh,h) \geq \gamma \|h\|^2$, where $2\gamma = \min \|a_j\|^2$. From (3) it follows

$$h^{(j)} = \begin{cases} \dfrac{(v_{\sigma,j-1}, a_j) - c^{(j)}}{\sigma \|a_j\|^2} & \text{if } (v_{\sigma,j-1}, a_j) \geq c^{(j)}; \\ 0 & \text{if } (v_{\sigma,j-1}, a_j) < c^{(j)}, \end{cases} \qquad (4)$$

Card 3/5

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Iteration method of solving...

where $v_{\sigma,j-1} = v_\sigma - \sigma \sum_{\nu=1}^{j-1} h^{(\nu)} a_\nu$. Let $v'_\sigma = v_{\sigma,n} + \sigma p$. From (1) and (3) it follows

$$v_\sigma^{(i)} = \begin{cases} v'^{(i)}_\sigma & \text{if } v'^{(i)}_\sigma \geq 0 \\ 0 & \text{if } v'^{(i)}_\sigma < 0. \end{cases}$$

For the solution of problem II the following iteration method is given:

I. $$v_{k,o} = v_k.$$

II. $$h_k^{(j)} = \begin{cases} \dfrac{(v_{k,j-1}, a_j) - c^{(j)}}{\sigma \|a_j\|^2} & \text{if } (v_{k,j-1}, a_j) \geq c^{(j)} \\ 0 & \text{if } (v_{k,j-1}, a_j) < c^{(j)}; \end{cases} \qquad (4')$$

$$v_{k,j} = v_{k,j-1} - \sigma h_k^{(j)} a_j.$$

Card 4/5

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Iteration method of solving...

III. $v'_k = v_{k,n} + \delta p$.

IV. $v^{(i)}_{k+1} = \begin{cases} v'^{(i)}_k & \text{if } v'^{(i)}_k \geq 0; \\ 0 & \text{if } v'^{(i)}_k < 0. \end{cases}$

V. $(v^{(1)}_{k+1}, v^{(2)}_{k+1}, \ldots, v^{(m)}_{k+1}) = v_{k+1}$, $(h^{(1)}_k, h^{(2)}_k, \ldots, h^{(n)}_k) = h_k$.

There are 2 Soviet-bloc and 1 non-Soviet-bloc references. The reference to the English-language publication reads as follows: G.U.Kuhn, Sborn.per. Lineynyye neravenstva (Collected volume of translations, Linear Inequalities), I.L., 1959, 363-371.

ASSOCIATION: Leningradskoye otdeleniye Matematicheskogo instituta im.V.A. Steklova Akademii nauk SSSR (Leningrad Branch of the Mathematical Institute im.V.A.Steklov)

PRESENTED: November 28, 1960, by V.I.Smirnov, Academician
SUBMITTED: November 19, 1960

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16,6800

AUTHOR: Bulavskiy, V. A.

TITLE: Iterative solution of a general problem of linear programming

PERIODICAL: Sibirskiy matematicheskiy zhurnal, v. 3, no. 3, 1962, 313-332

TEXT: The author considers the problem (I) in order to determine the minimum of the linear forms (c,h) on a closed convex polyhedral set $Q \subset R_n$ which is defined by the restrictions

$$\sum_{j=1}^{n} h^{(j)} a_j = p,\ a_j - p \in R_m,\ d^{(j)} \leqslant h^{(j)} \leqslant f^{(j)} \quad (j = 1,2,\ldots,n).$$

This problem is replaced by the problem (II) to find a vector $h_\sigma \in Q$ such that $(c + \sigma B h_\sigma, h_\sigma) < (c + \sigma B h_\sigma, h)$ for all the $h \in Q$. B is a given quadratic matrix and σ a certain positive number. If σ tends to zero,

Card 1/2

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then problem I tends to problem II. The vector h_σ is obtained by an iterative process which can be regarded as a generalized process of successive projection.

SUBMITTED: August 12, 1961

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAVSKIY, V. A.

Dissertation defended for the degree of Candidate of Physicomathematical Sciences at the Joint Scientific Council on Physicomathematical and Technical Sciences; Siberian Branch 1962.

"Iterative Method of Solving Linear Programing Problems."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

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ACCESSION NR: AP3000507 S/0020/63/150/002/0231/0234

54

AUTHOR: Bulavskiy, V. A.; Rubinshteyn, G. Sh.

TITLE: Solution of the problem of convex programming with linear boundaries by the method of successive perfectization of the admissible vector

SOURCE: AN SSSR. Doklady, v. 150, no. 2, 1963, 231-234

TOPIC TAGS: convex programming, optimal vector

ABSTRACT: An optimal vector is obtained from a given admissible vector by means of an algorithm. Orig. art. has: 16 formulas.

ASSOCIATION: Institut matematiki s vychislitel'ny*m tsentrom Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Mathematics and Computer Center of the Siberian Division, Academy of Sciences SSSR)

SUBMITTED: 07Jul62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: MM NO REF SOV: 001 OTHER: 001

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAVSKIY, Vladimir Aleksandrovich; RUBINSHTEYN, Gennadiy Shlemovich; KANTOROVICH, L.V., akademik, otv. red.; ZAYTSEVA, I.P., red.

[Several lectures on linear programming] Neskol'ko lektsii po lineinomu programmirovaniiu. Novosibirsk, Red.-izd. otdel Sibirskogo otd-niia AN SSSR, 1964. 64 p. (MIRA 18:6)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAVSKIY, V.A.

An algorithm for solving the transport problem. Optim. plan. no.2:41-49 '64. (MIRA 18:6)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAWA, Tadeusz, inz.

Saws for machine woodworking. Mechanik 34 no.10:538-540 '61.

1. Fabryka Pil i Narzedzi, Wapienica.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAWA, J.

Distr: 4E2c(j)/4E3d

Evaluation of ferric oxide preparations as catalysts in the dehydrogenation of isopropyl alcohol by potentiometric, kinetic, and conductometric methods. W. Tomassi and J. Bulawa (Polytech. Inst., Warsaw). *Ukrain. Khim. Zhur.* 25, 699–707(1959)(in Russian); cf. *CA* 52, 15307*f*.—The potential of powd. Fe_2O_3 electrodes increases with increasing effectiveness as catalysts in dehydrogenating iso-PrOH. As the reaction proceeds, the potential of electrodes made from the catalyst falls with decreasing activity. This is caused partly by adsorption of H, but it also is due partly to alteration of the surface structure at the temp. used, since removal of H does not restore the original value. During the course of the reaction, the elec. cond. decreases, indicating that the catalytic action involves donation of electrons. If steam is included in the gas stream, reduction of Fe_2O_3 is decreased; this results in a prolongation of the active life of the catalyst.

John Howe Scott

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAWA, Tadeusz, inz.

Saws for machine woodworking. Mechanik 34 no.9:483-486 '61.

1. Fabryka Pil i Narzedzi, Wapienica.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

Bulay, A.T.

SADYKOV, A.S.; KRAVETS, I.A., glavnyy metodist; KHOKHLOV, F.D., otvetstvennyy redaktor; BULAY, A.T., redaktor; VESKOVA, Ye.I., tekhnicheskiy redaktor

[The "Tajik S.S.R." pavilion; a guidebook] Pavil'on "Tadzhikskaia SSR"; putevoditel'. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 23 p.

1. Moscow. Vsesoyuznaya sel'skokhozyaystvennaya vystavka, 1954-
2. Direktor pavil'ona (for Sadykov)
(Tajikistan--Agriculture)
(Moscow--Agricultural exhibitions)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

GREYMAN, A.A.; BULAY, P.I.

Felty's disease. Zdrav. bel. 8 no.1:45-47 Ja '62. (MIRA 15:3)

1. Kafedra obshchey khirurgii (zaveduyushchiy - zasluzhennyy deyatel' nauki USSR prof. T.Ye. Gnilorybov) Minskogo meditsinskogo instituta.

(ARTHRITIS, RHEUMATOID)

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BULAY, P.I.

Change in the microflora of burn surfaces before and after primary debridement during the late periods. Zdrav. Bel. 8 no.4:30-33 Ap '62. (MIRA 15:6)

1. Kafedra obshchey khirurgii (zaveduyushchiy kafedroy - zasluzhennyy deyatel' nauki USSR prof. T.Ye. Gnilorybov) Minskogo meditsinskogo instituta.
(BURNS AND SCALDS) (WOUNDS--MICROBIOLOGY)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAY, P.I.; KOT, A.I.

Experience in the treatment of thermal burns. Zdrav. Bel. 9 no.8:71-72 Ag '63 (MIRA 17:3)

1. Iz kafedry obshchey khirurgii (zav. - zasluzhennyy deyatel' nauki UkrSSR, prof. T.Ye. Gnilorybov) Minskogo meditsinskogo instituta.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, A. A., Engineer

"Investigation of the Continuous Casting Process for Ingots of Copper and Its Alloys." Sub 8 May 47, All-Union Sci Res Inst of Aviation Materials (VIAM)

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

L 17148-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10
ACCESSION NR: AR4049273 WW/RM S/0081/64/000/015/K012/K012

SOURCE: Ref. zh. Khimiya, Abs. 15K82

AUTHOR: Andreyeva, Ye. A., Bulayev, D.P., Zinevich, A.M., Prokof'yev, V.I., Serafimovich, V.B.

TITLE: Protective coating of underground piping with adhesive polymer films

CITED SOURCE: Tr. Vses. n.-i. in-ta po str-vu magistral'n. truboprovodov, vy*p. 17, 1963, 5-51

TOPIC TAGS: underground pipe, insulation material, polymer film, adhesive polymer film, protective coating, polyethylene film, polyvinyl chloride

TRANSLATION: The authors studied and developed new insulation materials based on adhesive polymer films. They also developed methods of applying these coatings to piping, improved the procedures for evaluating film properties and wrote requirements for adhesive polymer films designed for pipe insulation. It is noted that the high-pressure adhesive polyethylene films for underground piping insulation, currently manufactured by the Okhtinskiy Khim. Kombinat (Okhtinsk Chemical Combine) according to the technical

Card 1/2

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L 17148-65
ACCESSION NR: AR4049273

specifications of VNIIST satisfy the requirements for pipe coatings. As indicated by experiments, these films can be used year-round to coat piping at air temperatures above and below the freezing point. Introduction of the use of adhesive polymer films is limited at present by their inadequate supply and high cost. The economic effectiveness of applying adhesive films on piping represents an important aspect in the introduction of this product. Comparative calculations of the cost efficiency in applications of adhesive polyvinyl chloride films and strongly reinforced bituminous resin insulation on 720-mm pipe have demonstrated that the use of plastic films in place of bituminous compositions can produce an annual saving (per 100 km of piping) totalling 122,200 rubles. Bibl. with 23 titles. N. Popova

ASSOCIATION: none

SUB CODE: MT ENCL: 00

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, N.M.

BULAYEV, N. M.

Bulayev, N. M. "Variation in currents and voltages in a condenser motor," Sbornik trudov Leningr. elektrotekhn. in-ta svyazi im. Bonch-Bruyevicha, Issue 4, p. 103-10 Bibliog: 6 items

SO: U-3566, 15 March, 53 (Letopis 'Zhurnal 'nykh Statey, No1 14, 1949)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, V.G.; SINAYSKIY, G.V.

Improving the characteristics of the EMK-3M command-type "flying" micrometer. Prokat. proizv. no.2:95-102 '60. (MIRA 14:11)

(Thickness measurement)
(Rolling(Metalwork))

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, V. I.

ANDREYEVA, Ye.A.; ZHUKOV, V.I.; BULAYEV, V.I.; VALUYSKAYA, D.P.; KOMAROVA, L.S., red.; DEMIDOV, Ya.F., tekhn.red.

[Bituminous coatin... cathode protection] Bitumnye pokrytiia v usloviiakh katodnoi za...ity; nauchnoe soobshchenie. Moskva, Otdel nauchno-tekhn.informatsii, 1957. 13 p. (MIRA 11:2)
(Electrolytic corrosion) (Pipelines)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

Bulayev, V.I.

ANDREYEVA, Ye.A., kand.khim.nauk (Moskva); KRASNOYARSKIY, V.V., inzh. (Moskva); BULAYEV, V.I., inzh. (Moskva)

Means for increasing the stability of anticorrosive coatings of cathodically protected underground pipelines. Stroi. pred. neft. prom. 3 no.1:7-10 Ja '58. (MIRA 11:3)
(Pipelines) (Electrolytic corrosion)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

KRASNOYARSKIY, V.V., inzh.; BULAYEV, V.I., inzh.

Techniques of applying plastic coatings. Stroi.truboprov. 5 no.1: 9-11 Ja '60. (MIRA 13:8)
(Protective coatings)
(Pipelines)
(Plastics)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, V.I., inzh.; KRASNOYARSKIY, V.V., inzh.

Principles of drying priming coats. Stroi.truboprov. 5 no.6:18 Je '60. (MIRA 13:7)
(Pipe, Steel)
(Protective coatings)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, V.I., inzh.

Let's change the construction of catches on spools of waterproofing machines. Stroi. truboprov. 6 no.3:29 Mr '61. (MIRA 14:3)
(Insulating materials)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

ANDREYEVA, Ye.A., kand. khimicheskikh nauk; BULAYEV, V.I., inzh.; VALYUSKAYA, D.P., inzh.; ZINEVICH, A.M., inzh.; PROKOF'YEV, V.I., kand. tekhn. nauk; SERAFIMOVICH, V.B., inzh.

Protecting underground pipelines with cementing polymer coatings. Trudy VNIIST no.17:5-52 '63. (MIRA 18:3)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, V. V.

BULAYEV, V.V.

Automatic production line for machining cylinder heads. Mashinostroitel' no.9:3-6 S '57. (MLRA 10:9)
(Machine tools) (Automatic control) (Tractors--Engines)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BENDRIK, V.G., inzh.; BULAYEV, V.V., inzh.; ZHUCHKOV, A.M., inzh.

New methods for lead plating of chemical apparatus. Khim i neft. mashinostr. no.2:37-38 Ag '64 (MIRA 18:1)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

USSR/Cultivated Plants - Potatoes, Vegetables, Melons. M-3

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10786

Author : Bulayev, V.Ye.

Inst : All-Union Scientific Research Institute of Fertilizers and Agricultural Soil Husbandry.

Title : The Influence of Ammonia Solution on the Potato Root System.

Orig Pub : Vestn. s.-kh. nauki, 1956, No 3, 125-131

Abstract : In the All-Union Scientific Research Institute of Fertilizers and Agricultural Soil Husbandry a study was made of the characteristics of potato root growth in connection with the distribution of nitrogen and phosphorous (P) fertilizers in the soil. The plants were grown in special boxes with one glass wall for convenience of observation. This wall was shaded from the outside by light-proof

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10786

paper. Potato tubers which had been germinated for five weeks in the light were transplanted into these boxes, being set at a depth of 5 cm. with their tops right next to the glass wall. The fertilizers were applied either directly under the tuber or at a depth of 10 cm. Ammonia water (25% ammonia solution), ammonium nitrate, or ammonium sulfate were used as nitrogen fertilizers. The best results were attained when the fertilizers were distributed in layers in the soil. Phosphorous fertilizers should be applied directly under the tubers; nitrogen fertilizers, especially ammonia water, should be applied 3-5 cm. lower. Applying ammonia water directly under the tubers burns the young shoots and roots of the plants.

7

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

USSR / Cultivated Plants. Potatoes, Vegetables, Melons. M-4

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58590

Author : Bulayev, V. E.
Inst : All-Union Sci.-Research Institute of Fertilizers and Agrosoil Science
Title : Contribution to the Problem of the Technique of Introduction of Fertilizers Underneath Potato Sowings

Orig Pub : Byul. nauchno-tekhn. inform. Vses. n. i. in-t udobr. i agropochvoved., 1957, No 3, 14-24

Abstract : The effects of band, focus and other methods of introduction of NPK under potato sowings were compared on the heavy dusty argillaceous soil of the Moscow oblast. The introduction during the experiment of N^{90} P^{90} K^{90} by means of a band in the furrow produced a yield of 287 cwt/ha and 16.7% of starch; N^{45} P^{45} K^{45} introduced in the same manner produced 230 cwt/ha and 17.3% starch; N^{45} P^{45} K^{45} -

Card 1/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58590

introduced by focuses in holes with tubers - produced respectively 197 cwt/ha and 16.6%. Placing P^{20} from these mixtures in direct contact with tubers while introducing the rest of the fertilizer slightly aside increased the percentage of starch only insignificantly. The addition in other experiments of N^{15} to P^{20} into the holes in fields fertilized with manure, and also the introduction of N^{40} as top dressing did not increase the crop of tubers. Referring to the data supplied by laboratory experiments, the author shows the harmful influence of N and K on the absorption of P, introduced in a mixture, by the plant. -- V. V. Prokoshev

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

USSR / Cultivated Plants. Potatoes, Vegetables, Melons. M-4

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58598

Author : Bulayov, V. E.
Inst : Not given
Title : Local Introduction of Basic Fertilizers in Potato Culture

Orig Pub : Udobreniye i urozhay, 1957, No 4, 47-52

Abstract : No abstract given

Card 1/1

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, V. P., Cand Agr Sci -- Methods of local application of mineral fertilizers under potatoes on clayey turf-podzolic soils." Ufa, 1961. (Min of Agr RSFSR. Bashkir Agr Inst) (KL, 8-61, 253)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, V.Ye., kand.sel'skokhozyaystvennykh nauk

Simplest multicelled rotator for agrochemical laboratories.
Zemledelie 24 no.2:83 F '62. (MIRA 15:3)

1. Birskoye opytnoye pole Bashkirskogo nauchno-issledovatel'skogo instituta sel'skogo khozyaystva.
(Soils--Analysis)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, V.Ya., kand.sel'skokhozyaystvennykh nauk

Fertilizer factory on a collective farm. Zemledelie 24 no.8: Ag '62. (MIRA 15:9)
(Compost)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEV, V.Ye., kand.sel'skokhozyaystvennykh nauk

Spot placement of mineral fertilizers. Zemledelie 25 no.12:76-78 D '63. (MIRA 17:4)

1. Nauchno-issledovatel'skiy institut po udobreniyam i insektofungisidam.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

KUDRYAKOVA, N.A.; BRUSILOVSKAYA, V.A.; BULAYEVA, A.M.; DENISOVA, V.A.; KAPOROVA, A.V.

Strengthen the role of the plant laboratory. Tekst. prom. 17 no.3: 53 Mr '57. (MLRA 10:4)
(Textile research)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEVA, A.M.

KUDRYAKOVA, N.A.; BRUSILOVSKAYA, V.A.; BULAYEVA, A.M.

Reorganizing laboratory work. Tekst. prom. 17 no.8:44-45 Ag '57.
(Textile industry--Quality control) (MLRA 10:9)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

ACC NR: AR6026521 SOURCE CODE: UR/0372/66/000/004/V035/V035

AUTHOR: Bulayeva, I. V.; Zhuchenko, S. A.

TITLE: On the programming of the design algorithms of manufacturing processes

SOURCE: Ref. zh. Kibernetika, Abs. 4V218

REF SOURCE: Sb. Vopr. vychisl. matem. i vychisl. tekhn. Rostov-na-Don , Rostovsk. un-t, 1965, 104-110

TOPIC TAGS: industrial program, computer program, operations research, algorithm

ABSTRACT: A system of Ural-1 digital-computer programs designed to convert blueprint specifications of shaft and axle types to finished manufacturing flowcharts is described. The manufacturing process is divided into transitions, with a subroutine being compiled for each transition (altogether there are 24 such subroutines in the system). A block diagram of a subroutine and a method of coding source information are described. Yu. Bayakovskiy. [Translation of abstract]

SUB CODE: 09, 12

Card 1/1 UDC: 519.5:681.142

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEVA, L.M.

Mycorhiza of fodder beans. Agrobiologiia no.3:434-436 My-Je '63. (MIRA 16:7)

1. Permskiy gosudarstvennyy sel'skokhozyaystvennyy institut.
(Mycorhiza) (Beans)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEVA, L.M.

Mycotrophy of Triticum-Agropyron hybrids. Bot. zhur. 48 no.8: 1131-1137 Ag '63. (MIRA 16:10)

1. Permskiy sel'skokhozyaystvennyy institut imeni akademika D.N. Pryanishnikova.
(Mycorhiza) (Triticum--Agropyron hybrids)

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LISITSYN, V., serzhant; IBRAGIMOV, R., mladshiy serzhant;
BULAYEVA, R., starshina; KULSAATOV, N., sanitarnyy instruktor,
mladshiy serzhant

Field training on the agenda. Starsh.-serzh. no.6:4-5 Je '64.
(MIRA 17:7)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

S/137/62/000/003/158/191
A052/A101

AUTHORS: Zamyatnin, M. M., Bulayeva, T. A.

TITLE: Nitriding steel products at high-frequency heating

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 101, abstract 3I654 (V sb. "Prom. primeneniye tokov vysokoy chastoty v elektrotermii". Moscow-Leningrad, Mashgiz, 1961, 109-117)

TEXT: The experiments on nitriding steel products at high-frequency heating with the purpose to reduce the duration of the process of nitriding bushings, piston pairs of 25Kh5MA (25Kh5MA) steel and samples of 38KhMYuA (38KhMYuA), 40Kh (40Kh) and 4Kh13 (4Kh13) steel were carried out at heating from a control generator with a frequency of 8,000 cycles/sec and a power of 100 kw up to 500, 550, 600 and 650°C with a 3 hours' exposure. NH_3 gas for nitriding was supplied after drying. The experiments have shown that the most suitable temperature of nitriding with high-frequency heating is 550°C which secures the production of 0.2 - 0.25 mm layers on 25Kh5MA bushings and pistons in 3 - 4 hours. The thickness of a layer with $H_v > 820$ is 0.08 - 0.12 mm. 38KhMYuA and 40Kh steels under equal conditions give almost the same layer thickness and 4Kh13 steel a considerably

Card 1/2

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Nitriding steel products ...

lesser thickness (0.06 - 0.09 mm in 3 hours at 550°C). The nitriding in liquid (NH_3 solution) has not given positive results.

A. Babayeva

[Abstracter's note: Complete translation]

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEVSKAYA-MASLOVA, F.G.

Asymptotic estimates of the spectral function of a Laplace operator. Dif. urav. 1 no.11:1509-1524 N '65.

(MIRA 18:12)

1. Moskovskiy fiziko-tekhnicheskiy institut.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEVSKIY, D.S.

Stratigraphy of the Verkhoyansk sedimentary complex in the eastern Verkhoyansk Range. Trudy IAFAN SSSR.Ser.geol. no.3: 73-92 '59. (MIRA 13:6)
(Verkhoyansk Range—Geology, Stratigraphic)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

FLEROV, B.L.; BULAYEVSKIY, D.S.; DOROFEYEV, D.A.

Geological position of lead-zinc mineralization in the southern Verkhoyansk Range. Geol.rud.mestorozh. no.2:59-74 Mr-Ap '62. (MIRA 15:4)

1. Yakutskiy filial Sibirskogo otdeleniya AN SSSR i Aldanskoye rayonnoye geologorazvedochnoye upravleniye.
(Verkhoyansk Range—Ore deposits)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

S/056/60/039/002/043/044
B006/B070

AUTHORS: Bulayevskiy, L. N., Fayn, V. M., Freydman, G. I.

TITLE: Instability of Uniform Precession of Magnetization

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol 39, No. 2(8), pp. 516 - 517

TEXT: The appearance of non-homogeneous magnetization in magnetic systems, placed in a constant external magnetic field, causes a perturbation of the uniform precession. In this "Letter to the Editor", the authors study the stability of uniform precession of ferro- and ferrimagnetic systems (the uniform precession is considered unstable if small fluctuations result in a building-up of magnetization waves). A ferromagnetic is considered first. The change of the magnetization obeys the equation: $\dot{\vec{M}} = -\gamma[\vec{M}\vec{H}_{eff}]$, $\vec{H}_{eff} = \vec{H}_0 + \lambda\vec{M} + H_{ex}(l^2/M)\nabla^2\vec{M} + \vec{H}_d$, ($\vec{H}_0$ - the external magnetic field, λ - molecular field constant, H_{ex} - molecular field strength, l - the interatomic distance, H_d - the demagnetizing

Card 1/3

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field). For a solution of this equation in the linear approximation in the form of magnetization waves (spin waves) with frequency ω_k and wave vector $\vec{k}$, the dispersion relation (2) holds true. The condition for the instability of the state of the system (build-up of the spin waves) is: $-4\pi M < H_i + H_{ex} l^2 k^2 < 0$; $H_i = H_o - 4\pi M N_z$, N_z - demagnetization factor. Instability always appears when the angle between $\vec{H}_o$ and $\vec{M}$ is larger than $\pi/2$. It is impossible to have stable uniform precession of magnetization if the angle between $\vec{H}$ and $\vec{M}$ is obtuse. Analogous considerations are made for the ferrimagnetic. The condition obtained for instability is: $2\omega_{ex} K + K^2 + \omega_{ex}^2 l^2 k^2 < 0$. Here $K = \frac{1}{2}(\gamma_1 - \gamma_2)H_o + \frac{1}{2}(\gamma_1 + \gamma_2)H_a$; $\omega_{ex} \approx \gamma H_{ex}$; γ_1 and γ_2 are the gyromagnetic ratios of the first and the second sublattices; H_a is the effective field of anisotropy (equal for both sublattices). The results show that in the region of the compensation point in the linear approximations considered here, uniform precession dominates. There are 5 references: 2 Soviet and 2 US.

Card 2/3

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Instability of Uniform Precession of Magnetization

S/056/60/039/002/043/044
B006/B070

ASSOCIATION: Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo universiteta (Institute of Radio Physics of the Gor'kiy State University)

SUBMITTED: May 25, 1960 (initially) and July 25, 1960 (after revision)

Card 3/3

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

30678
S/141/61/004/004/007/024
E140/E435

24.2200 (1144, 1147, 1164)

AUTHOR: Bulayevskiy, L.N.

TITLE: On the instability of a uniform magnetization precession

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, v.4, no.4, 1961, 639-647

TEXT: The question of the stability of uniform magnetization precession arises in connection with the establishment of excited states in ferro- and ferrimagnetic systems. Growing waves of nonuniform magnetization arising in a constant magnetic field in such systems disrupt the uniform precession and the latter is considered unstable if small fluctuations give rise to such increasing magnetization waves. The conditions under which instability arises were given in earlier work (Ref.1: L.N.Bulayevskiy, V.M.Fayn, G.I.Freydman. ZhETF, 39, 516 (1960)) and in the present article these questions are considered in greater detail. The author first considers unstable uniform precession in the linear approximation, starting from the vector equation for a change of magnetization in a magnetic field, taking into account the interatomic distance. The system is taken in the shape of an ellipsoid and the effects of propagation and boundary

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conditions are neglected. If H is the constant magnetic field and M the magnetization, the dispersion equations derived are valid for angles between H and M close to zero or π, i.e. not near $\pi/2$. It is found that the inverted state of a ferrimagnetic at the point of compensation is unstable with respect to the formation of spinwaves and conclusions given in the literature (Ref.4: V.M.Fayn, ZhETF, 34, 1032 (1958); Ref.5: V.M.Fayn, Izv.VUZ, Radiofizika, v.1, 5-6, 75 (1958); Ref.6: F.R.Morgenthaler, IRE Trans. of Microwave Theory and Techniques, v.1, 6 (1959)) are valid. However, for ferromagnetic systems the inverted states are unstable and the results of these works are not applicable to ferromagnetic systems (ferrites). The author then passes to a consideration of the nonlinear mechanism for the formation of spinwaves. The interaction of spinwaves with uniform precession was first studied by H. Suhl (Ref.9: J. Phys. Chem. Solids., v.1, 209 (1957)) for ferromagnetics, but the work is valid only for small-amplitude uniform precession. The present author considers interaction of spinwaves with uniform precession of arbitrary amplitude - with the same restriction as in the linear case, that the angle between H and M be not close to $\pi/2$. The

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discussion is limited only to the question of the stability of the uniform precession. Finally, the author considers the question of radiation of ferromagnetics in free space, taking into account the spin-waves. It is found that the energy stored in the magnetic field can pass completely into electromagnetic radiation energy during a fairly short time. The restriction in the work to angles not close to $\pi/2$ has no physical foundation, being due only to the divergence of a series expansion employed in the derivations. The author feels that the characteristics of the unstable states near $\pi/2$ are compatible with those obtained at other values of the angle. A note added proof states that similar results to the present work have been obtained by T.Schaug-Pettersen, J. Appl. Phys. Suppl, 31, 382 S (1960). The conclusions of the author are summed up in Table 1.
Acknowledgments are expressed to V.M.Fayn for proposing the subject and attention to the work. There are 1 table and 10 references: 6 Soviet-bloc and 4 non-Soviet-bloc. The four references to English language publications read as follows:
Ref.2: L.R.Walker, Phys. Rev., v.105, 390 (1957);
Card 3/4

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

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On the instability of a uniform ... E140/E435

4

Ref.3: M.H.Cohan, F.Keffer, Phys. Rev., v.99, 1128 (1955);
Ref.6: as quoted in text;
Ref.9: as quoted in text.

SUBMITTED: August 30, 1960

Card 4/64

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

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B108/B102

24, 00

AUTHOR: Bulayevskiy, L. N.

TITLE: Theory of a linear antiferromagnetic chain

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 968 - 973

TEXT: The thermodynamic properties of a linear antiferromagnetic chain are studied by means of quantum field theory. This is possible when the spin operators ($S_i = 1/2$) are transformed so that the Hamiltonian of the linear spin chain can be represented as a Hamiltonian with four-fermion interaction:

$$\mathcal{H} = \sum_k \varepsilon_0(k)\, a_k^+ a_k + \frac{1}{2} \sum_{k_1+k_2=k_3+k_4} V(k_1 - k_3)\, a_{k_1}^+ a_{k_2}^+ a_{k_3} a_{k_4} \qquad (7).$$

ε_0 is the fermion energy, V is the interaction potential in momentum representation. The Hartree-Fok approximation to this Hamiltonian is determined: $E = -\frac{1}{4} p^2 - hs + s^2$. s is the mean z-component of the

Card 1/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

Theory of a linear antiferromagnetic...

spin, $h = \mu H/J$, J - exchange integral (here $J = 1$), $p = 1 - 2\sum_k n_k \cos k$, n_k - occupation number. For the ground state one has $s = 1/2$, $p = 1$, $E_o = -h/2$ in the case of $h > 2$, and $h = (1+2\pi^{-1}\cos\pi s)\sin\pi s + 2s$, $p = 1 + 2\pi^{-1}\cos\pi s$, $E_o = -1/4 + s^2 - \pi^{-1}\cos\pi s - \pi^{-2}\cos^2\pi s - hs$ in the case of $h < 2$. The specific heat is $c = -\frac{1}{2} pdp/dT$, which is a continuous function of temperature. A phase transition of the second kind does not exist. The magnetic susceptibility does not vanish at absolute zero. There are 2 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: March 29, 1962

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEVSKIY, L.N.

Thermodynamic theory of domain walls in perovskite type ferroelectrics. Fiz. tver. tela 5 no.11:3183-3187 N '63. (MIRA 16:12)

1. Fizicheskiy institut imeni Lebedeva AN SSSR, Moskva.

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L 17626-63 EWT(1)/BDS AFFTC/ASD/IJP(C)

S/056/63/044/003/035/053

53
52

AUTHOR: Bulayevskiy, L. N.

TITLE: Theory of nonuniform antiferromagnetic spin chains

PERIODICAL: Zhurnal eksperimental'noy i tekhnicheskoy fiziki, v. 44, no. 3, 1963, 1008-1014

TEXT: In an earlier paper (Ref. 1: ZhETF, 43, 968, 1962) the author investigated a linear short chain of spins with exchange interactions identical for all adjacent pairs. V. L. Ginzburg and V. M. Fayn (Ref. 2: ZhETF, 42, 183, 1962) stated the problem concerning the excitation of more complex spin systems. The present paper investigates a short $s = \frac{1}{2}$ spin chain shown on Fig. 1, the circles representing the positions of the spins and the connecting lines — the interactions between the spins. This linear spin system with antiferromagnetic interactions between closest neighbors has different interaction constants between each spin and its left and right neighbors. A system with such a nonuniform interaction may serve as a model for π-electrons of linear molecules with alternating bonds. The transformation of spin operators to operators of the Fermi type and the Hartree-

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Theory of nonuniform antiferromagnetic spin chains

Fock approximation are used. It is shown that in a system with nonuniform interaction an excitation gap exists for an arbitrary number of spins. In a linear chain the gap disappears only in the case of a homogeneous exchange interaction of an infinite number of spins. The method of calculation can be extended to more complex structures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute im. P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: October 17, 1962

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEVSKIY, L.N.; GINZBURG, V.L.

Temperature dependence of the shape of the domain wall in ferromagnetics and ferroelectrics. Zhur. eksp. i teor. fiz. 45 no.3:772-779 S '63. (MIRA 16:10)

1. Fizicheskiy institut imeni P.N. Lebedeva AN SSSR.
(Domain structure)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

ACCESSION NR: AP4034067 S/0126/64/017/004/0631/0633

AUTHORS: Bulayevskiy, L. N.; Ginzburg, V. L.

TITLE: Possibility of the existence of surface ferromagnetism

SOURCE: Fizika metallov i metallovedeniye, v. 17, no. 4, 1964, 631-633

TOPIC TAGS: ferromagnetism, surface property, rare earth, magnetic moment

ABSTRACT: The possible existence of antiferromagnetic or paramagnetic crystals whose surface layer is ferromagnetic is discussed; such would be the case if there were uncompensated magnetic moments at the surface. The particular case of helical structure (structure type of rare-earth metals) is considered, with the axis of the helix assumed perpendicular to the surface and the spins directed along the surface. The angle between the directions of the average values of spins in adjacent layers is θ (neglecting surface effects). Considering only the interaction between nearest and next nearest neighbors, the exchange energy is

$$E = -N_0 S^2 \sum_{k=1}^{n-2} [J_1 \cos\theta_k + J_2 \cos(\theta_k + \theta_{k+1})],$$

where θ_k is the angle between the spins of the k layer and those of the k + 1

Card 1/3

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layer, N_0 is the number of unit cells in a layer perpendicular to the helix axis, S is the spin per cell, $I_1 > 0$ and $I_2 < 0$ are the parameters of the exchange interaction, and the thickness of the sheet is na, a being the lattice constant in the direction of the helix axis. Minimizing E over all θ_k results in a system of n-1 coupled homogeneous equations, the solution of which is sought in the form

$$\theta_k = \theta + \alpha_k, \text{ where } \theta = \arccos\left(-\frac{I_1}{4I_2}\right),$$

Assuming $\alpha_k \ll 1$, a finite-difference equation for α_k is written from which

$$\alpha_k = \alpha_1 e^{-\lambda(k-1)} \text{ for } 1 < k < n/2;$$
$$\alpha_k = \alpha_2 e^{\lambda(k+1-n)} \text{ for } n-1 \geq k > n/2.$$

where $\operatorname{ch}\lambda = \frac{1}{2\cos^2\theta - 1}$ and $\alpha_1 = -\frac{\sin\theta}{\sin\theta + \cos\theta}$. Thus, for sufficiently small θ, the surface effects strongly distort the helix near the surface, and the distortion decreases exponentially with depth. A rough calculation shows that the uncompensated magnetic moment per unit surface area can reach $3 \cdot 10^{-4}$ erg/gauss for $\theta \sim 0.1$. Orig. art. has: 18 equations.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Institute of Physics

Card 2/3

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ACCESSION NR: AP4034067

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SUBMITTED: 23Nov63 ENCL: 00

SUB CODE: SS, MM NO REF SOV: 001 OTHER: 001

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ACC NR: AP6024884 SOURCE CODE: UR/0056/66/051/001/0230/0240

42
B

AUTHOR: Bulayevskiy, L. N.

ORG: Institute of Chemical Physics of the Academy of Sciences, SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

TITLE: Quasihomopolar electron levels in crystals and molecules

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 1, 1966, 230-240

TOPIC TAGS: Hamiltonian, degenerate system, Schroedinger equation, molecule, spin Hamiltonian, quantum mechanics, ELECTRON DENSITY

ABSTRACT: Quasihomopolar states of a system with a half-filled band which is narrow compared with the conduction band of metals (copper salts and antiferromagnetics, such as iron-group transition metals, oxides, and hydrocarbons with conjugated bonds) are analyzed by means of the perturbation theory for degenerate levels of a many-particle system. The low-energy levels of these systems belong to the quasihomopolar states for which the Schroedinger equation can be projected into the spin function space. Operators corresponding to physical quantities can be projected into the spin function space. A method is proposed for calculating the projected Hamiltonian and projected physical quantity operators of the systems. Corrections to the Heisenberg Hamiltonian are obtained for antiferromagnetics. The projected current operators and electron density distribution are investigated.

Card 1/2

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After calculation of the projected operators, the problem reduces to a solution of the Schroedinger equation with a spin Hamiltonian in the spin function space. Orig. art. has: 32 formulas. [CS]

SUB CODE: 20/ SUBM DATE: 24Jan66/ ORIG REF: 004/ OTH REF: 009

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYNOKH, N. I. Cand Tech Sci

Dissertation: "Influence of Hydrological Factors in Draining Peat Deposits Before Exploitation."

28/12/50

Moscow Peat Inst.

SO Vecheryaya Moskva
Sum 71

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BAUSIN, A.F.; SOKOLOV, A.A.; ANTONOV, V.Ya.; KURDYUMOV, S.V.; BEL'KEVICH, P.I.; SAVINYKH, A.I.; KARAKIN, F.F.; SOLOPOV, S.G.; YEFIMOV, V.S.; YARIVITSIN, V.I.; RABKIN, B.A.; BABARIN, A.F.; MATVEYEV, L.M.; FUNIKOV, S.A.; CHERNENKOV, D.P.; BULAYEVSKIY, N.V.; kandidat tekhnicheskikh nauk; SHINKARINK, K.K.; TSUPROV, S.A.; GINZBURG, L.N.; VASIL'YEV, Yu.K.

Scientific and technical conference on the work of the peat industry of the Ministry of Electric Power Stations. Torf.prom. 32 no.2:1-20 '55. (MLRA 8:5)

1. Zamestitel' ministra elektrostantsiy (for Bausin). 2. Zamestitel' direktora VNIITP (for Sokolov). 3. Zamestitel' direktora MTI (for Antonov. 4.Zamestitel' direktor "'krniimesttopprom"(for Kurdyumov). 5. Direktor Instituta torfa AN BSSR(for Bel'kevich). 6. Nachal'nik Glavenergozapchasti MES(for Savinykh). 7. Glavnyy inzhener Ivanovsko - go torfotresta (for Karakin). 8. Zamestitel' direktora MTI (for Solo pov) 9. Upravlyayushchiy Shaturskogo torfotresta (for.Yefimov). 10. Glavnyy mekhanik Invanosvkogo torfotresta (for Yarovitsin). 11. Glavnyy mekhanik Leningradskogo torfotresta (for Rabkin). 12. Glavnyy inzhener Ozeretsko-Neplyuyevskogo torfopredpriyatiya (for Babarin). 13. Glavnyy inzhener Gor'kovskogo torfotresta (for Matveyev). 14 Rukovoditel' laboratorii VNIITP (for Funikov). 15. Glavnyy inzhener tresta Lentorfostroy (for Chernenkov).

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

SOLOPOV, S.G., prof., doktor tekhn. nauk; BULAYEVSKIY, N.V., dotsent, kand. tekhn. nauk

Intensive drainage of peat deposits by means of deep drainage ditches. Nauch. dokl. vys. shkoly; gor. delo no.1:15-20 '59. (MIRA 12:5)

1.Predstavlena kafedroy torfyanoy mekhaniki i gidrotekhniki Kalininskogo (b.Moskovsk.) torfyanogo instituta.
(Peat) (Drainage)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEVSKIY, V.F.

[Concrete construction in winter for hydraulic structures] Zimnie betonnye raboty na stroitel'stve gidrotekhnicheskikh sooruzhenii. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1953. 66 p. (MLRA 7:6)

(Concrete construction--Cold weather conditions)
(Hydroelectric power stations)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BULAYEVSKIY, V.F., prof.

[Selecting the composition of hydraulic concrete] Podbor sostava gidrotekhnicheskogo betona; metodicheskaia zapiska. Sost. V.F.Bulaevskii. Tashkent, 1957. 63 p. (MIRA 14:10)

1. Tashkent. Institut inzhenerov irrigatsii i mekhanizatsii sel'skogo khozyaystva. Kafedra organizatsii i mekhanizatsii gidromeliorativnykh rabot.

(Concrete)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

Bulayka, A. G.

BULAYKA, A.G.

Some peculiarities of the demarcation of river basin boundaries in White Russia. Vestsi AN BSSR no.4:138-141 Jl-Ag '52.(MLRA 7:8)
(White Russia--Hydraulic engineering) (Hydraulic engineering--White Russia)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BUL'BA, T., kand. ekonom. nauk

International significance of the building of communism in the U.S.S.R. Komm. Vooruzh. Sil 5 no.24:32-39 D '64.
(MIRA 18:2)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BUL'BA, T., inzh. (Stantsiya Golta)

Experimental operation of contact welding machines. Zhel.dor. transp. 36 no.6:84 Je '55. (MIRA 12:4)
(Railroads--Rails--Welding)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BUL'BA, T.G., inzhener (st.Golta); POSPELOV, A.A., inzhener (st Golta).

Transporting long welded rails. Zhel.dor.transp. 37 no.4:86 Ap '56.
(Railroads--Rails--Transportation) (MLRA 9:7)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BUL'BA, T.G., inzh.; BABCHENKO, D.K., inzh.

Mechanical loading of rails. Put' i put.khoz. 4 no.11:15 N '60.
(MIRA 13:12)

1. Nachal'nik rel'sosvarochnogo poyezda, st. Golta, Odesskoy dorogi (for Bul'ba). 2. Nachal'nik otdela mekhanizatsii sluzhby puti, st. Golta, Odesskoy dorogi (for Babchenko).
(Railroads—Rails)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

BUL'BA, T.G.

Putting into practice the decisions of the Congress of the Party.
Put' i put.khoz. 5 no.12:7 D '61. (MIRA 15:1)

1. Nachal'nik rel'sosvarochnogo poyezda No.13, stantsiya Golta, Odesskoy dorogi.
(Railroads--Labor productivity)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307420020-3

1.2300

24781
S/125/61/000/008/009/014
D053/D113

AUTHOR: Bul'ba, T.G.

TITLE: Trial operation of a K-135 rail-welding machine

PERIODICAL: Avtomaticheskaya svarka, no. 8, 1961, 76-78

TEXT: Trial operation of a new K-135 (K-135) rail-welding machine and the test results of a principally new continuous fusion resistance-welding process for rails are described. Both the K-135 welder and the new rail-welding process were developed by the Institut elektrosvarki ordena Trudovogo Krasnogo Znameni im. Ye.O. Patona Akademii nauk Ukrainskoy SSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye.O. Paton of the Academy of Sciences Ukrainskaya SSR) during a research program aimed at developing new processes and rail-welding equipment with better technical and economic indices than the existing AE9 (AE9) and PCKM-320 (RSKM-320) rail-welding machines. Field tests of the K-135 welder using the new continuous fusion resistance-welding process were carried out from 1959 to 1961 on the Odesskaya zheleznaya doroga (Odessa Railroad) by the Rel'sosvarochnyy poyezd No. 13 Odesskoy zheleznoy dorogi (Rail-Welding Train No. 13 of the Odessa Rail-

Card 1/4

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road). A total of 12,000 joints were welded on P 65 (R65) and P 50(R50) heavy-duty rails. Welded rail specimens underwent static bending tests according to technical standards issued by the MPS. The obtained results (Tables 1 and 2) indicated that the breaking load and deflection in the tested joints considerably surpass the technical standards in which the minimum permissible breaking load is 80 tons for R50 rails and 140 tons for R65 rails, and the minimum permissible deflection is 30 mm for all types of rails. The quality of the welded joints was checked by an УЗД-НИИМ-5 (УЗД-59) (UZD-NIIM-5 / UZD-59/) ultrasonic flaw detector. The welding process was programmed with the use of special electronic voltage regulators. The required welding power and the consumption of electric energy was reduced 3-4 times and the welding time was cut by 1.7 - 2 times, as compared to other welding processes. The welding time can be further reduced by mechanizing the rail-centering operation. There are 2 tables.

ASSOCIATION: Rel'sosvarochnyy poyezd No. 13 Odesskoy zheleznoy dorogi (Rail-Welding Train No. 13 of the Odessa Railroad)

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Trial operation of a K-135...

Breaking load in tons	Number of welded samples, %		
	K-135		RSKM-320
	R65	R50	R50
80 - 100	-	5.3	6.0
100 - 120	-	19.0	32.7
120 - 140	-	33.1	46.4
140 - 160	37.5	26.6	11.9
160 - 180	31.5	14.2	3.0
180 - 200	28.1	1.8	-
200 and above	2.9	-	-

Table 1

Card 3/4

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Trial operation of a K-135...

Deflection in mm	Number of welded samples, %		
	K-235		RSKM-320
	R65	R50	R50
30 - 40	51.0	46.2	50.0
40 - 50	38.7	38.5	37.7
50 - 60	8.6	10.6	10.7
60 and above	1.7	4.7	3.6

Table 2

Card 4/4

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